

CLAIM AMENDMENTS

1-21. (canceled)

22. (new): An isolated nucleic acid comprising a nucleotide sequence encoding at least one functional domain of a polypeptide selected from the group consisting of SEQ ID NO's: 65-96 or functional equivalents thereof.

23. (new): The nucleic acid of claim 22 wherein the nucleotide sequence encodes a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO's: 65-96 or functional equivalents thereof.

24. (new): The nucleic acid of claim 22 that hybridizes to a nucleotide sequence selected from the group consisting of SEQ. ID. NO's: 33-64 or from the group consisting of SEQ ID NO's: 1-32 under stringency conditions of washing at 1 X SSS, 0.1% SDS at 42°C.

25. (new): The nucleic acid of claim 24 that hybridizes to a polynucleotide selected from the group consisting of SEQ ID NO's: 44, 33-43 and 45-64 or from the group consisting of SEQ ID NO's: 1-32 under stringency conditions of washing at 1 X SSS, 0.1% SDS at 60°C.

26. (new): The nucleic acid of claim 25 that comprises a nucleotide sequence selected from the group consisting of SEQ ID NO's: 44, 33-43 and 45-64 or from the group consisting of SEQ ID NO's: 1-32 or functional equivalents thereof.

27. (new): The nucleic acid of claim 26 selected from the group consisting of SEQ ID NO's: 33-64 from the group consisting of SEQ ID NO's: 1-32.

28. (new): The nucleic acid of claim 22 obtainable from a filamentous fungus.

29. (new): The nucleic acid of claim 28 obtainable from *Aspergillus niger*.

30. (new): A vector which comprises the polynucleotide sequence of claim 22.

31. (new): A nucleic acid molecule which comprises the nucleotide sequence of claim 22 operatively linked with regulatory sequences suitable for expression of said nucleotide sequence in a suitable host cell.

32. (new): The nucleic acid molecule of claim 31 wherein said suitable host cell is a filamentous fungus.

33. (new): Recombinant host cells which contain the vector of claim 30.

34. (new): Recombinant host cells which contain the nucleic acid of claim 31.

35. (new): A method to prepare a nucleic acid molecule comprising a nucleotide sequence encoding a pectinase comprising culturing the cells of claim 33 and recovering the vector from the culture.

36. (new): A method to prepare a pectinase comprising the steps of culturing the cells of claim 34 and optionally isolating said pectinase from said culture.

37. (new): An isolated recombinant pectinase prepared by the method of claim 36.

38. (new): An isolated protein selected from the group consisting of SEQ ID NO's: 65-96 and functional equivalents thereof.

39. (new): The isolated protein of claim 38 obtainable from *Aspergillus*.

40. (new): The recombinant pectinase of claim 37 comprising a functional domain of a PEC 1-32 polypeptide.

41. (new): The protein of claim 37 which is purified.

42. (new): Purified antibodies reactive with a protein of claim 37.

43. (new): A fusion protein comprising a protein of claim 37.